

NEW RECORDS OF MARINE CRUSTACEA ISOPODA FROM SOUTH AFRICA

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(With 18 figures)

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ABSTRACT

Fourteen new records of marine isopods from South African waters are provided. These include one new genus, *Arcturinooides*, and six new species, *Arcturinooides sexpes*, *Microarcturus dayi*, *Munna (Munna) sheltoni*, *Pleurosignum capensis*, *Munnopsis bispinosus* and *Paracanthaspidia natalensis*.

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SPECIES LIST

SPECIES	<i>Material</i>	<i>Locality</i>	<i>Depth (metres)</i>	<i>Substrate</i>
ARCTURIDAE				
<i>Antarcturus beliaevi</i> Kussakin	12 ♂♂ 10 ♀♀	33°49'S 16°30'E	2500–3000	—
<i>Arcturinooides sexpes</i> gen. et sp. nov.	6 ♂♂ 2 ♀♀	33°58'S 25°42'E	26	coarse sand and broken shell
<i>Microarcturus dayi</i> sp. nov.	18 ♂♂ 3 ♀♀	33°49'S 18°27'E	9–18	coarse sand and broken shell
<i>Microarcturus quadriconus</i> Kensley	4 ♂♂ 1 ♀	33°49'S 18°27'E	9–18	coarse sand and broken shell
<i>Neastacilla tranquilla</i> Kensley	1 ♂	34°33'S 24°01'E	130	rock
ANTHURIDAE				
<i>Anthelura remipes</i> Barnard	2 ♀♀	32°03'S 18°17'E (Off Lambert's Bay)	10	fine sand
<i>Panathura amstelodami</i> Kensley	2 ♂♂ 2 ♀♀	33°13'S 43°51'E (Walter's Shoal)	38–46	calcareous algae
PARANTHURIDAE				
<i>Accalathura indica</i> (Nierstrasz)	1 ♀	24°46'S 43°51'E	110	—
JANIRIDAE				
<i>Pseudojanira stenetrioides</i> Barnard	1 ♂	24°53'S 34°56'E	55	fine grey sand

SPECIES	Material	Locality	Depth (metres)	Substrate
MUNNIDAE				
<i>Munna (Munna) sheltoni</i> sp. nov.	numerous ♂♂ & ♀♀	Sandvlei Estuary False Bay	±1	<i>Ruppia</i> weed
<i>Pleurosignum capensis</i> sp. nov.	2 ♂♂ 3 ♀♀	34°18'S 18°39'E 34°51'S 23°41'E	48-183	fine khaki sand
MUNNOPSISIDAE				
<i>Munnopsis bispinosus</i> sp. nov.	1 ♀	34°16'S 18°14'E	158	fine khaki sand
ACANTHASPIDIIDAE				
<i>Paracanthaspidia natalensis</i> sp. nov.	1 ♂	27°14'S 33°22'E	1360	globigerina ooze

SYSTEMATIC DISCUSSION

Family Arcturidae

Antarcturus beliaevi Kussakin

Figs 1-2

Antarcturus beliaevi Kussakin, 1967: 291, figs 42-43.

Description

Female. Head with two pairs submedian dorsal spines, anterior spines longer. First pereionite with two pairs dorsal spines, one pair lateral spines, coxae bearing five spines. Second to fourth pereionites similar to first but coxae with single strong spine. Fifth to seventh pereionites shorter than preceding ones, each with single pair of dorsal spines and three pairs small lateral tubercles, coxae with single strong spine. First three pleonites fused, with single pair dorsal spines each, two or three lateral tubercles, first segment with two pairs ventral spines. Pleotelson with numerous dorsal spinules; uropods bearing few scattered spinules. Pereiopods II to IV with distal spine on merus, ischium, basis, latter with several more spines on its length. Bases of pereiopods V to VII also spinose.

Previous records

At Kerguelen in Gaussberg Chain; between Heard Is. and Davis Sea, 1580-1620 m.

Material

- SAM-A14989 6 ♂♂ TL 29,5 mm to 22,0 mm 33°49'S 16°30'E 2740 m
 8 ♀♀ TL 29,4 mm to 20,2 mm
 2 ovig. ♀♀ TL 34,5 mm 31,0 mm
 SAM-A10506 1 ♂ 27,0 mm TL 33°50'S 16°30'E 2500-3000 m
 SAM-A14992 5 ♂♂ 6 ♀♀ 1 juv. 33°49'S 16°30'E 2740 m

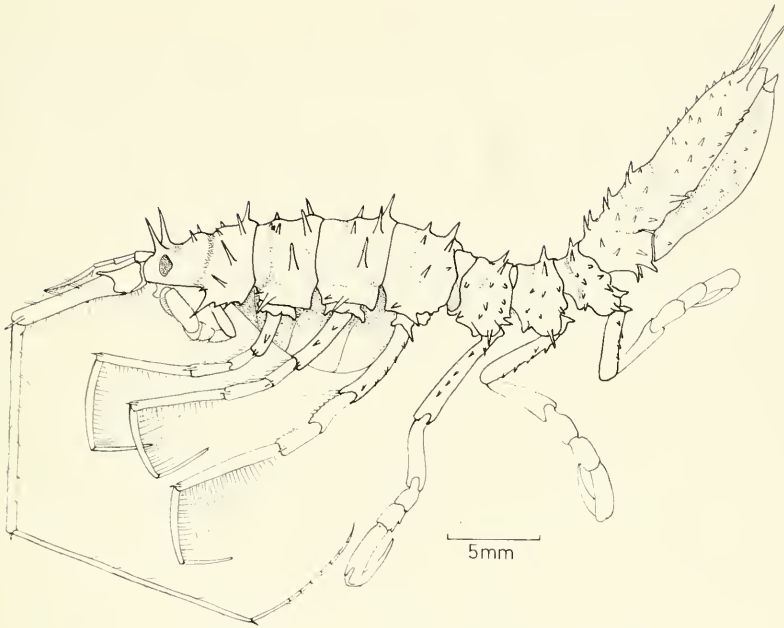


Fig. 1. *Antarcturus beliaevi* ♀ lateral view.

Remarks

Kussakin (1967) described this species from four adult males. The only difference between these males and the present material is that lateral spines of the anterior four pereionites are better developed in the South African specimens. The female of this species is considerably more spinose than the male, and to some extent resembles *A. floridanus* Richardson, from off Florida. Some differences do exist between the American and the present species. The pleotelson of the former is more spinose, bearing more and longer spines. Further, pereopods II to IV of the former are strongly spinose, especially the propodi and carpi. No differences could be detected between the appendages of Kussakin's holotype description and the present males.

Arcturinoidea gen. nov.

Diagnosis

Body dorso-ventrally flattened, non-geniculate. Eyes lateral. Head distinct from pereionite I. Pleon consisting of two fused but distinguishable segments plus pleotelson. Palp of third maxilliped with third segment very broad. Pereiopod I within ventral rim of head. Pereiopods II and III 5-segmented, setose. Pereiopod IV absent in ♂ and ♀. Remaining pereiopods normal, ambulatory. Three pairs of oostegites, those of segments II and III membranous, covered by broad semicircular strong pair of segment IV, meeting in midline, and

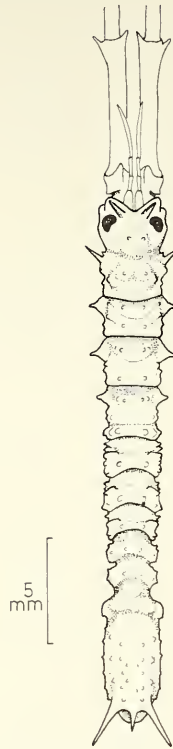


Fig. 2. *Antarcturus beliaevi* ♂ dorsal view.

completely closing the brood pouch. Penis slender, elongate, apex not divided. Stylet of pleopod 2 in male longer than rami, apically trifid.

Type-species of the genus: *Arcturinoides sexpes* sp. nov.

Arcturinoides sexpes sp. nov.

Figs 3–5

Description

Ovigerous female. Body twice longer than wide, strongly depressed, slightly raised rounded mid-dorsal ridge. Pereonites I to III increasing in width posteriorly, segment IV largest, twice wider than long, with two median dorsal rounded processes. Segments V to VII half width or less than segment IV. Posterior pereon and pleon tapering gently. Pleon consisting of two fused but distinguishable segments plus triangular pleotelson. Brood pouch situated beneath segments III and IV, eleven eggs visible through dorsal integument. Brood pouch formed by three pairs of oostegites, those of segments II and III thin, membranous, covered by broad semicircular rigid pair of segment IV, meeting in midline and completely closing pouch.

Male. Body three times longer than wide, widest at pereionites II and III. Eyes lateral, pronounced spine-like rostrum between antennular bases. Body tapering gently to pleotelson, pleon consisting of two fused but distinguishable segments plus triangular pleotelson.

Antennule 4-segmented, two basal segments short, fairly broad, two distal segments elongate, terminal segment bearing two aesthetascs and small cluster of setae.

Antennal peduncle 4-segmented, two basal segments short, equal in length; two distal segments subequal in length, slender; flagellum about half length of last peduncular segment, 3-segmented, with slender terminal spine.

Mandible with tridentate incisor process, 4-dentate lacinia, with three penicils at its base; molar process broad, setose.

First maxilla with outer ramus broad, curved, with several simple distal spines inner ramus shorter and narrower than outer, with four setae distally.

Second maxilla inner ramus broad, bearing several plumose setae on distal margin; both lobes of outer ramus each with two elongate setae.

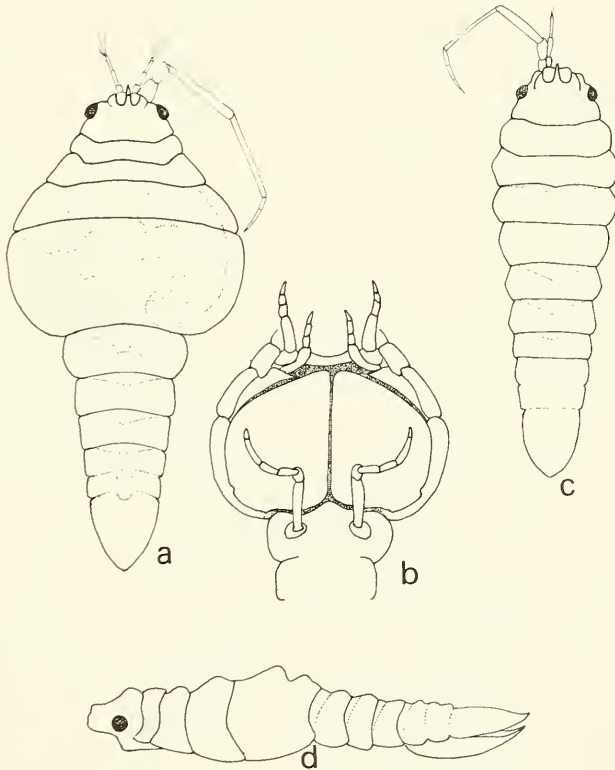


Fig. 3. *Arcturinoidea sexpes*. a. ♀ dorsal view. b. brood pouch in ventral view. c. ♂ dorsal view. d. ♂ lateral view.

Maxillipedal endite bearing six plumose setae near inner distal angle, single coupling hook on inner margin, palp 5-segmented, 3rd segment very broad, four distal segments with setae on inner margins.

Pereiopod I folded against mouthparts within rim of head and first pereonite; dactylus with strong claw; propodus bearing numerous fringed setae; carpus with fringed setae on ventral margin and large fringed spine on ventrodistal margin.

Pereiopod IV absent.

Pereiopods V to VII similar, stouter and more elongate than preceding pereiopods, with few short setae on ventral margin.

Penis slender, elongate, apex apparently not divided.

Pleopod 1 unspecialized, basis stout, with three coupling hooks; exopod

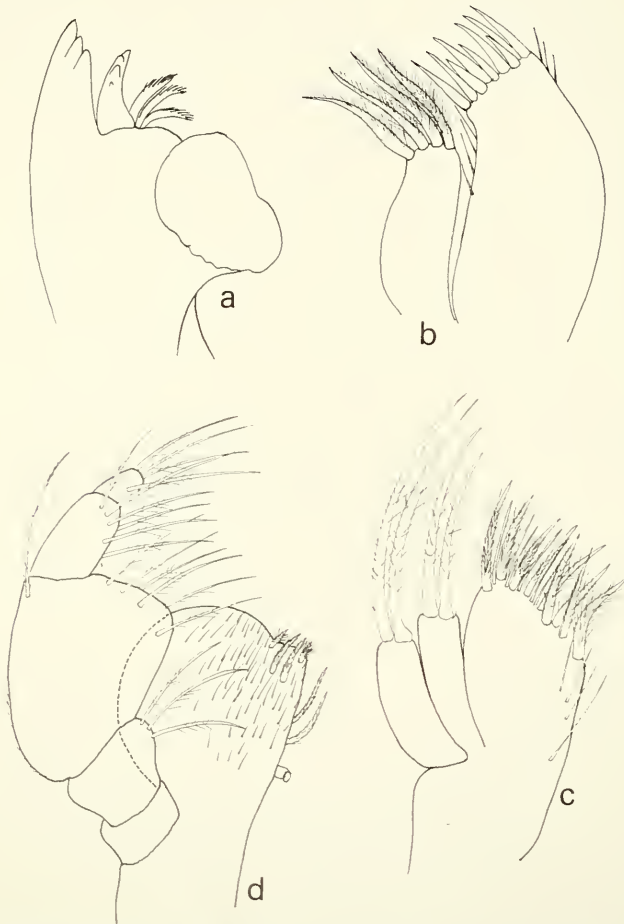


Fig. 4. *Arcturinooides sexpes*. a. Mandible. b. 1st maxilla. c. 2nd maxilla. d. Maxilliped.

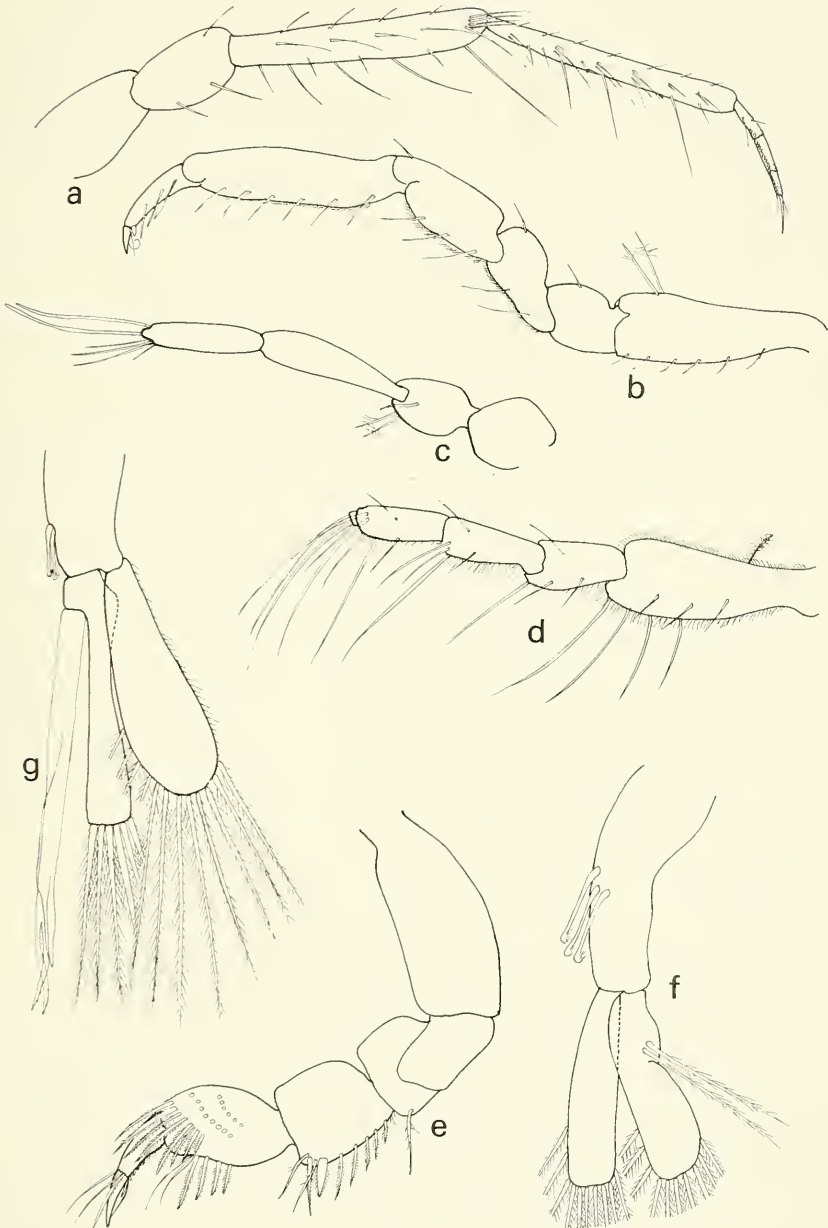


Fig. 5. *Arcturinooides sexpes*. a. Antenna. b. Pereiopod VII. c. Antennule. d. Pereiopod II. e. Pereiopod I. f. Pleopod 1 ♂. g. Pleopod 2 ♂.

with kink on outer margin marked by two long plumose setae; both rami distally truncate/rounded, bearing numerous elongate plumose setae.

Pleopod 2 outer ramus distally rounded, broad; inner ramus slender, apically truncate; both rami with elongate plumose setae distally; stylet attached to base of inner ramus almost twice length of inner ramus, distally tridentate. Uropod with rounded longitudinal ridge running entire length close to midline.

Material

SAM-A15350 Holotype 1 ovig. ♀ TL 4,0 mm Allotype 1 ♂ TL 3,8 mm
29°51'S 31°25'E 60 metres

SAM-A15351 1 ovig. ♀, 4 ♂♂ 29°51'S 31°25'E 60 metres

SAM-A15352 1 ♂ 33°58'S 25°42'E 26 metres, coarse sand and broken shell

Remarks

The present material shows strong resemblances to species of *Arcturina*. The similarities include the inclusion of pereopod I within the margin of the head, pereopods II and III, and pereopods V to VII being similar, the basic plan of the first and second pleopods of the male, the construction of the brood pouch, and the antennae. (See Kensley 1975: 55.) Several differences, however, are apparent. They include pereopod I, which in *Arcturinoides* is not as flattened and specialized as in *Arcturina*; the non-geniculate body; the antennule bearing one segment more; the inner ramus of the first maxilla bearing four (not three) distal setae. The most important differences, however, which require the separation of this species into a new genus, are the absence in both the male and female of a fourth pair of pereopods (from which absence the specific name is derived), and the very expanded condition of the third segment of the maxillipedal palp.

Microarcturus dayi sp. nov.

Figs 6-7

Description

Female. Body very tuberculate, widest at third pereionite. Head with antero-lateral corner acute, spinose; eyes large, lateral; posterior part convex, bearing two strong submedian spines. Pereionite I with small coxa; segment II with triangular coxa directed laterally, numerous apically rounded small tubercles laterally, two submedian dorsal spines; segment III with large coxae, submedian dorsal tubercle enlarged into two flattened processes; segment IV with small blunt coxa and numerous dorso-lateral tubercles; segments V to VII similar, with small coxae directed postero-laterally. Pleon consisting of two segments similar to pereionites V to VII plus pentagonal pleotelson; base of latter bearing medio-dorsal rounded boss armed with strong spine; pleotelson strongly convex, with numerous small tubercles.

Antennule reaching to end of second antennal peduncle segment, 4-segmented, basal segment broadest, distal segment bearing several aesthetascs

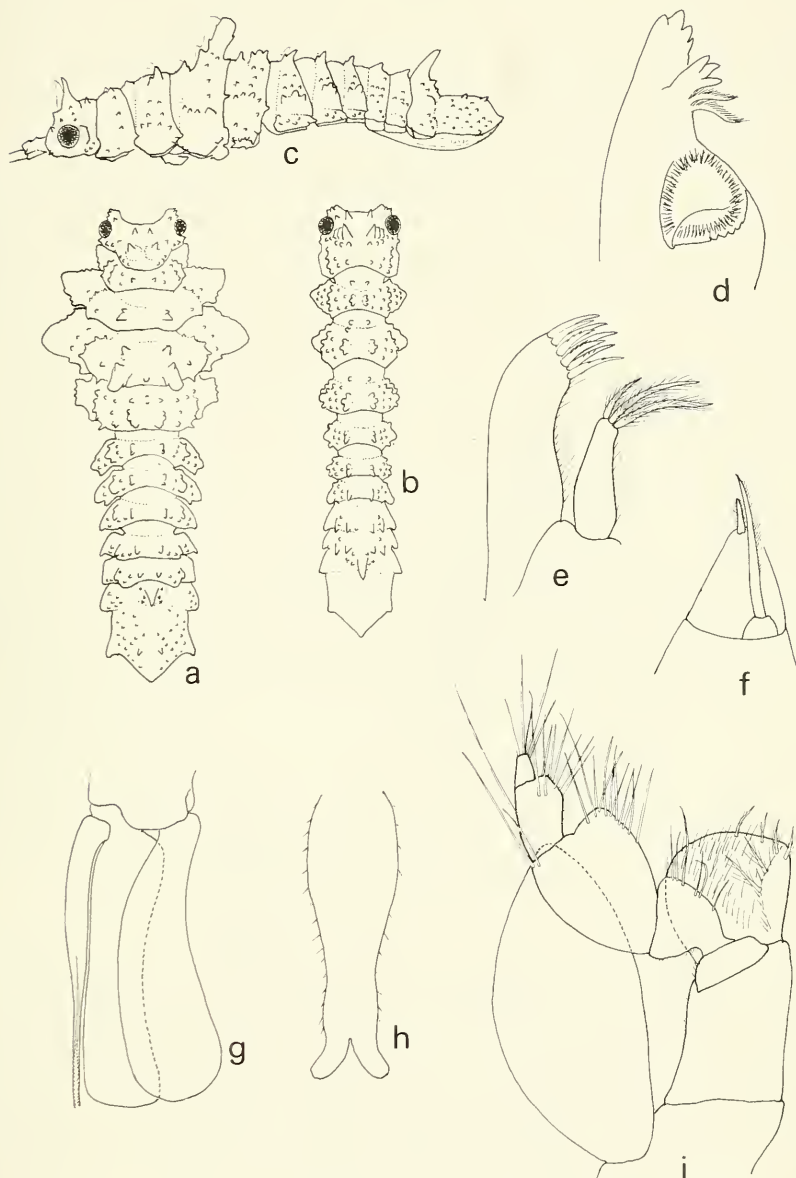


Fig. 6. *Microarcturus dayi*. a. ♀ dorsal view. b. ♂ dorsal view. c. ♀ lateral view. d. Mandible. e. 1st maxilla. f. Apex of uropod. g. Pleopod 2 ♂. h. Penis. i. Maxilliped.

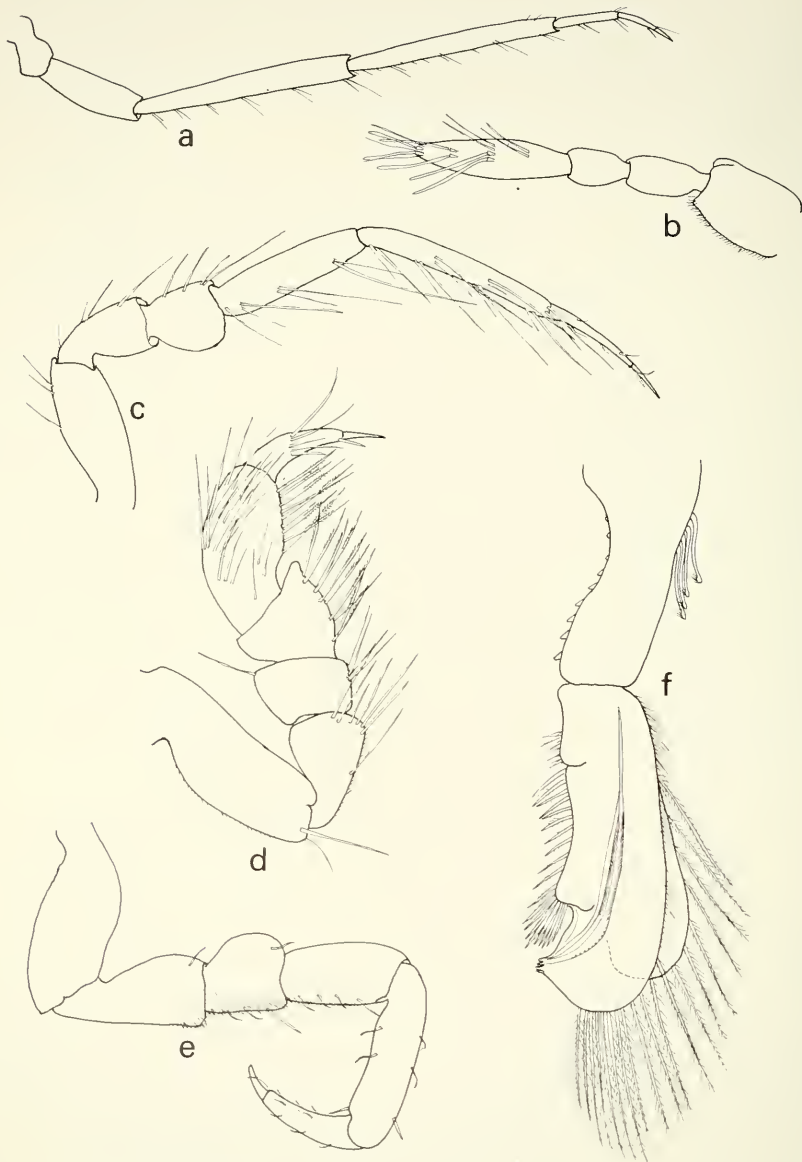


Fig. 7. *Microarcturus dayi*. a. Antenna. b. Antennule. c. Pereiopod II. d. Pereiopod I. e. Pereiopod VII. f. Pleopod 1 ♂.

and setae. Antennal peduncle 4-segmented, basal segment short, second segment half length of third, latter elongate, slender, equal in length to fourth segment, flagellum 2-segmented, with terminal claw.

Mandible with 4-dentate incisor process, tridentate lacinia, with two penicils at base, molar process setose, broad, with slightly dentate margin.

First maxilla with outer ramus bearing several dentate spines; inner ramus narrower and shorter than outer, with three plumose apical setae.

Maxillipedal palp 5-segmented, third segment broadest and longest, segments with numerous setae; endite broad, outer margin broadly convex.

Pereiopod I shorter than following pereiopods, bearing numerous setae. Pereiopods II to IV increasing in length posteriorly, three distal segments slender, elongate, setose.

Pereiopods V to VII stouter than preceding pereiopods, ventral margins of carpi, meri, and ischia finely setose.

Male. Body elongate, lateral margins more or less parallel. Head and first pereionite almost indistinguishable, two strong submedian spines present.

Pereionite III lacking enlarged dorsal tubercles found in female. Strong medio-dorsal spine present at base of pleotelson. Penis with rami united except at apex; tips diverging.

Pleopod 1 with outer ramus broader and slightly longer than inner, with groove bearing setae running almost entire length, ramus distally strongly convex, groove ending at sub-terminal spout-like process, outer margin bearing short almost spinose setae; distal margin bearing elongate plumose setae.

Pleopod 2 carrying elongate stylet on base of inner ramus; stylet narrowed for distal half.

Material

SAM-A15353 Holotype 1 ♀ TL 7,5 mm Allotype 1 ♂ TL 7,0 mm

Paratypes 1 ♀♀ 17 ♂♂

33°49'S 18°27'E 9-18 metres, coarse sand and shell

Remarks

There is a strong resemblance between this species and *M. ornatus* Kensley, 1975, from Still Bay, off the south coast. This resemblance lies in the general tuberculate/spinose nature of both species, the presence of flattened dorsal tubercles, expanded coxae on the anterior pereionites. The species can be separated on several points: differences in the shape of the outlines of the anterior expanded coxae, the absence of a strong spine at the base of the pleotelson in *M. ornatus*, the absence of spinose processes on pereiopods II to IV in *M. dayi*, and differences in the proportions and shape of the maxilliped and the stylet of pleopod 2 of the male.

The species is named for Professor J. H. Day, retired Professor of Zoology, University of Cape Town.

Family **Paranthuridae***Accalathura indica* (Nierstrasz)

Fig. 8

Metanthura indica Nierstrasz, 1941: 247, figs 15-24.

Description

Body elongate, head two-thirds length of pereionite I; latter longer than following segments; pereionites II to VI subequal, segment VII half length of VI, with postero-lateral extensions stretching to end of second pleonal segment. Six pleonites distinct. Telson lanceolate, with single median statocyst opening dorsally near base. Head with large eyes, mouthparts modified for piercing and sucking. Antennae with multiarticulate flagella. Maxillipedal palp 2-segmented, extending beyond apex of endite. Pereiopod I palm of propodus very gently convex, with short rounded process at base.

Pereiopods IV to VII elongate, carpi not underriding propodi.

Four pairs of oostegites present.

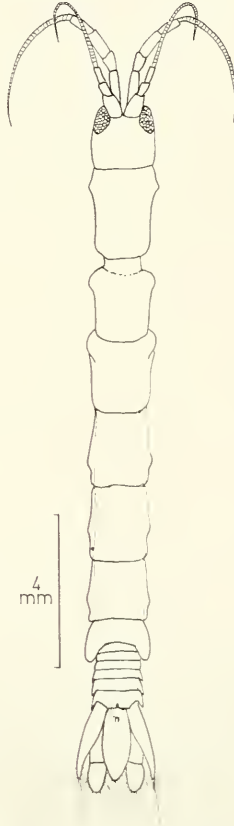


Fig. 8. *Accalathura indica*.

Previous records

Java Sea, 73 metres.

Material

SAM-A15348 1 ovig. ♀ TL 19 mm 24°46'S 35°18'E 100 metres.

Remarks

The only difference between Nierstrasz's specimen and this female would seem to be the absence of a statocyst in the former. Possibly it was obscured. There is no reason to separate *Metanthura* from *Accalathura* on this slim difference (see Pillai 1966: 152).

Family Janiridae

Pseudojanira stenetrioides Barnard

Figs 9-10

Pseudojanira stenetrioides Barnard, 1925: 406, fig. 5a-c. Wolff, 1962: 252.

Description

Male. Body oval, strongly convex, finely setose. Head with broadly rounded rostrum (extension of frontal margin); rostral margin smooth (the apparently dentate condition of the type may be due to shrinkage of the almost membranous margin). Eyes of twelve ocelli each.

Antennule short, six-segmented, two distal segments tiny.

Maxilla 1 with three stout setae and single short spine at apex of inner ramus; outer ramus armed with several dentate spines.

Maxilla 2 inner ramus armed with fringed spines and setae; both lobes of outer ramus each bearing four elongate fringed setae.

Pereiopod I subchelate, dactylus ending in strong claw with seven or eight dentate spines on inner edge; propodus inflated, broadened distally; outer angle of palm armed with strong spine, palm armed with eight or nine fringed spines; outer surface of propodus strongly setose; carpus short, merus with triangular setose process on dorsal margin; ischium with slightly produced setose extension; basis with thickly setose area on anterior surface.

Pleopods I basally fused, distally truncate, with outer distal angles somewhat produced, setose.

Previous records

Zululand coast, in coral (eulittoral) 1 ♀, TL 3 mm.

Material

SAM-A15345 1 ♂ TL 3.0 mm 24°53'S 34°56'E 55 metres, from fine grey sand

Remarks

The lack of coxae, the completely dorsal sessile eyes, well developed rostrum, the enlarged propodus of the subchelate first pereiopod, and the form

of the first pleopods of the male, all demand the maintenance of *Pseudojanira* as a valid genus of the Ianiridae.

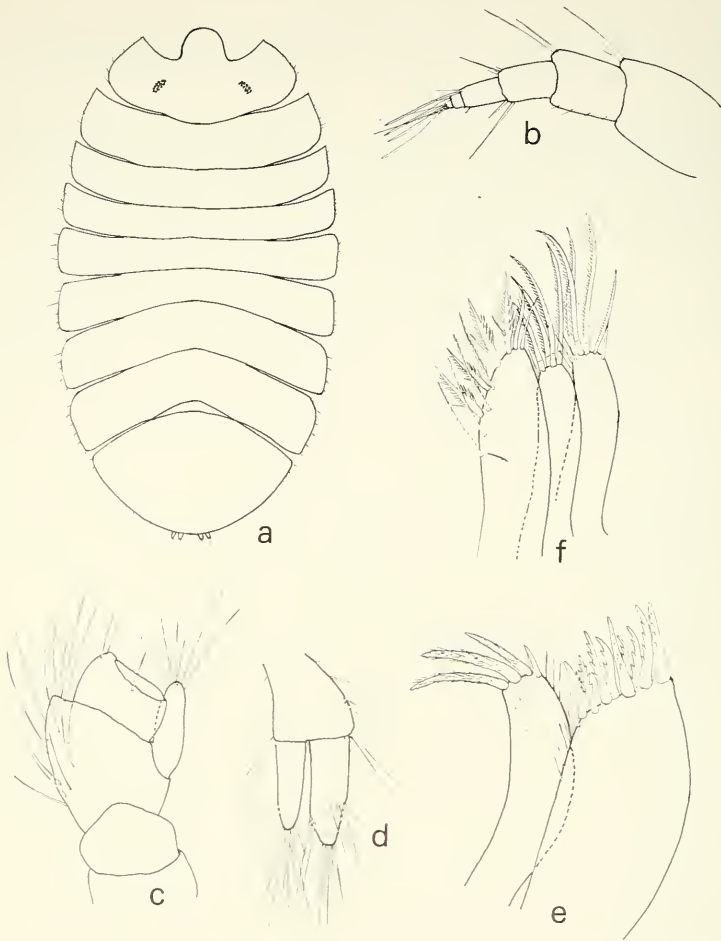


Fig. 9. *Pseudojanira stenetrioides*. a. ♂ dorsal view. b. Antennule. c. Antennal base. d. Uropod. e. 1st maxilla. f. 2nd maxilla.

Family Munnidae

Munna (Munna) sheltoni sp. nov.

Figs 11-12

Description

Female. Body almost twice longer than wide, widest at pereionites III and IV; with dorsal purple blotches and reticulations; gaps between lateral extensions of pereionites II-V, pleotelson with pale cross formed by four dark

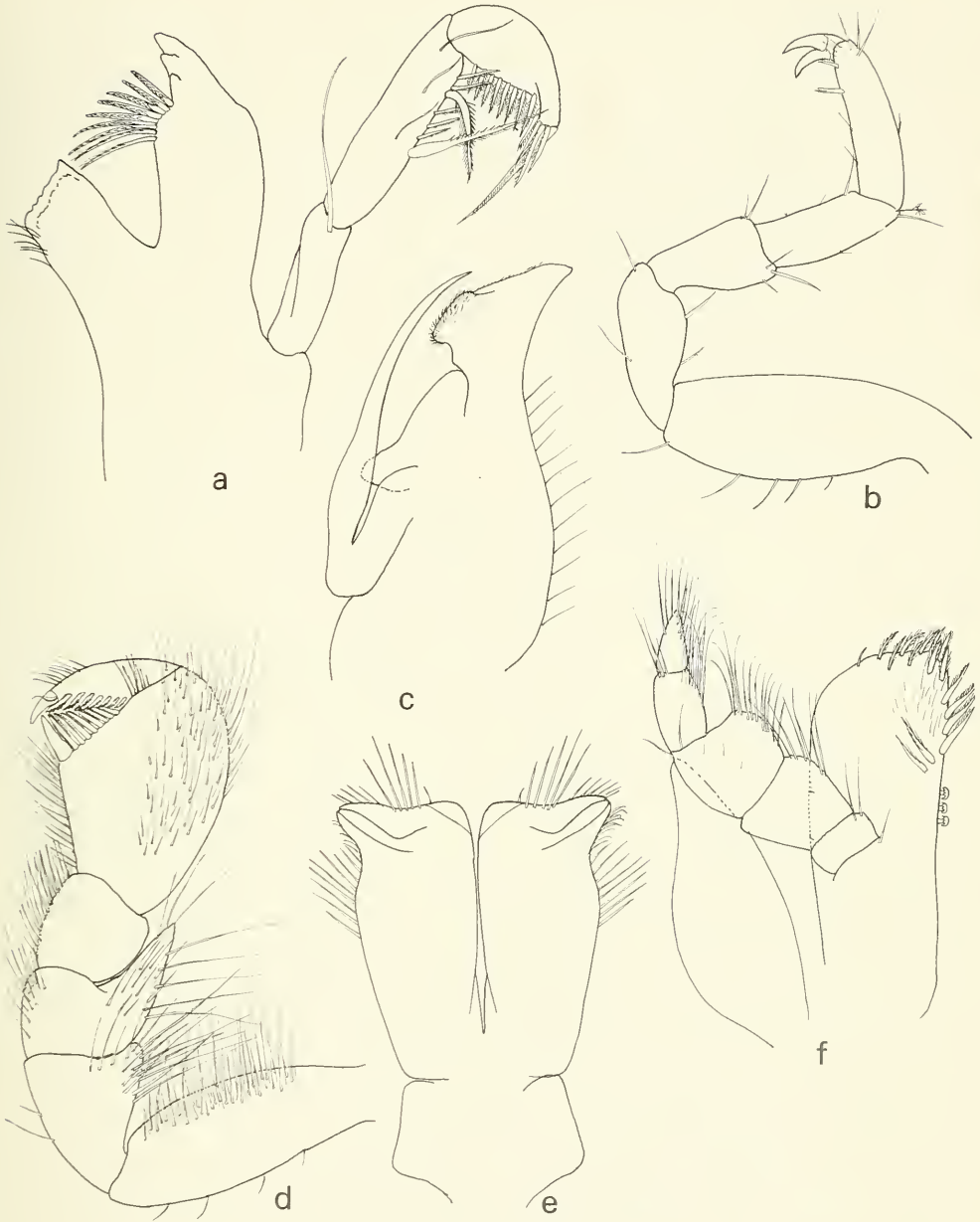


Fig. 10. *Pseudojanira stenetrioides*. a. Mandible. b. Pereiopod VII. c. Pleopod 2 ♂. d. Pereiopod I. e. Pleopod 1 ♂. f. Maxilliped.

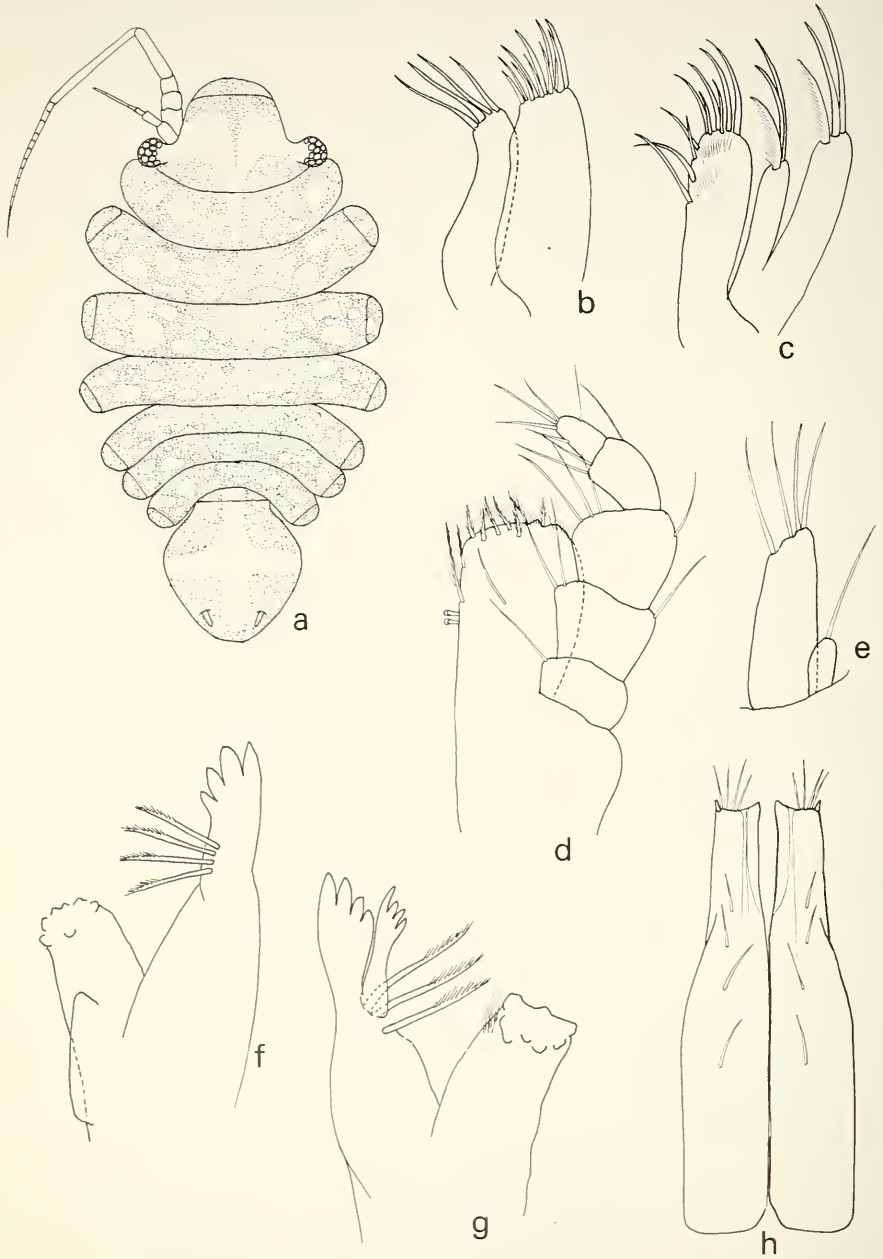


Fig. 11. *Munna (Munna) sheltoni*. a. ♀ dorsal view. b. 1st maxilla. c. 2nd maxilla. d. Maxilliped. e. Uropod. f. Right mandible. g. Left mandible. h. Pleopod 1 ♂.

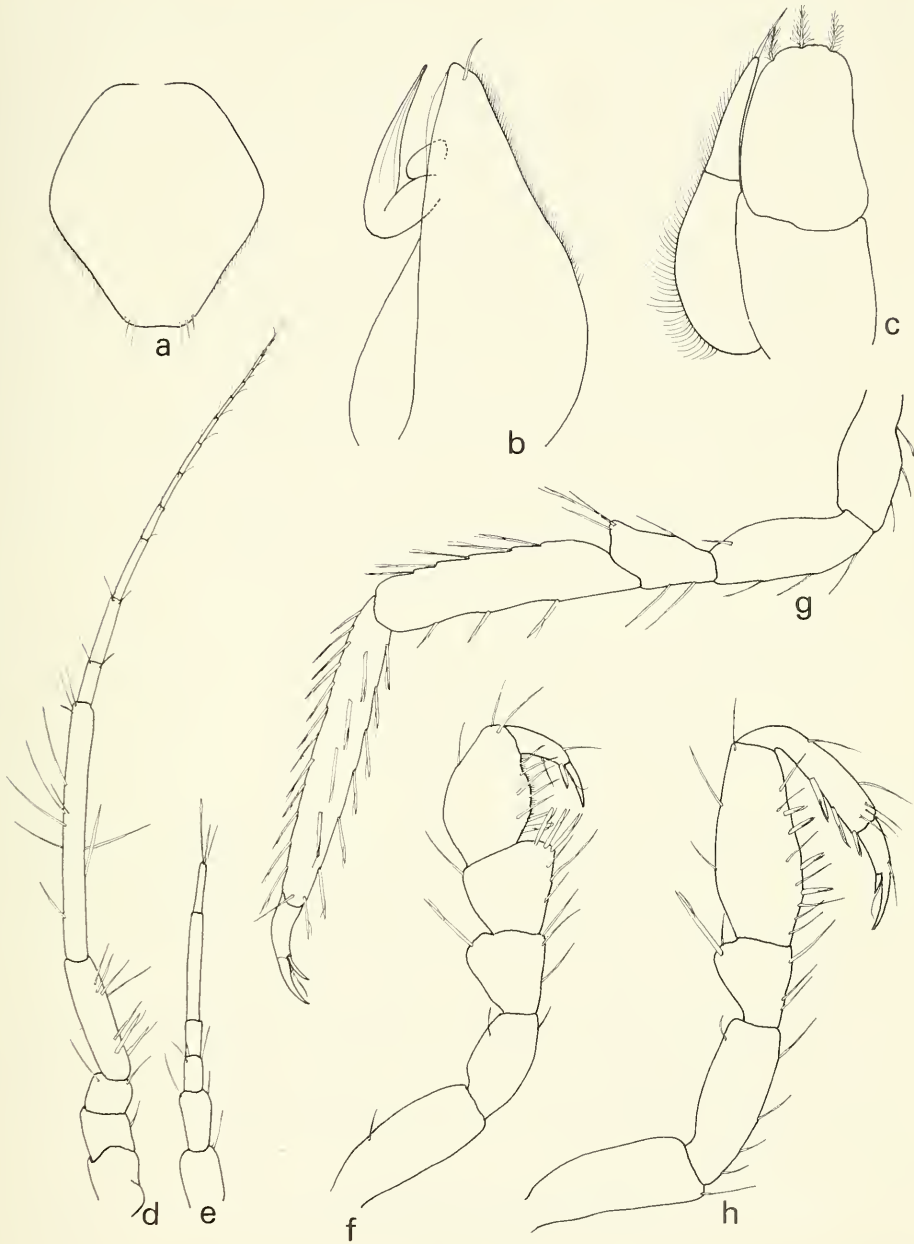


Fig. 12. *Munna (Munna) sheltoni*. a. ♀ operculum. b. Pleopod 2 ♂. c. Pleopod 3 ♂. d. Antenna. e. Antennule. f. Pereiopod I. g. Pereiopod II. h. Pereiopod VII.

blotches. Frontal margin straight, eyes large, stalked. Antennule of six segments, terminal segment half length of penultimate segment. Antennal peduncle of five segments, distal segment twice length of penultimate segment, flagellum of about eleven segments.

Maxilla 2 with both lobes of outer ramus tipped with two simple and one fringed seta.

Maxillipedal palp with three basal segments broad; two coupling hooks present.

Dactylus of pereopod I shorter than propodus, tipped with strong claw and secondary spine; propodus broad, with fine setules on inner margin; carpus with three stout sensory spines at disto-ventral corner.

Pereopod II with dactylus and propodus slender, former tipped with two spines, latter with three sensory spines on ventral margin; carpus twice longer than wide, with several spines and setae on ventral margin.

Pereopod VII dactylus with strong claw and secondary spine; propodus elongate, with numerous slender sensory spines; carpus shorter than propodus. Operculum hexagonal.

Male. First pleopod rami elongate, distally with short spine on outer angle acute, distal margin slightly concave.

Second pleopod outer distal margin with fine setules.

Material

SAM-A15347 Holotype 1 ovig. ♀ TL 1,4 mm

Allotype 1 ♂ TL 1,2 mm

± 100 additional specimens

Sandvlei estuary, Muizenberg, Cape

Remarks

M. sheltoni most closely resembles *M. lundae* Menzies, 1962, from southern Chile, but differs in having a relatively broader pereion and pleotelson. Differences also exist in the spination and shape of the apex of the male first pleopod, the relative lengths of the antennular segments, and the shape and spination of the pereopods. The colour pattern, especially that of the pleotelson, makes this species easily recognizable.

The material was taken from Sandvlei estuary, at a time when the estuary was closed to the sea, and the salinity about 9‰. The munnids were very abundant on the submerged leaves and stems of the water weed, *Ruppia*. The species was first collected by P. Shelton of the University of Cape Town, for whom it is named.

Pleuosignum capensis sp. nov.

Figs 13–14

Description

Female. Body width about two-thirds length (excluding spine-like epimera), widest at pereionites III and IV. Head with convex frontal margin between

elongate eyestalks, somewhat sunken into pereonite I. All pereonites with spine-like coxae visible dorsally. Pleon consisting of single short segment and broadly oval pleotelson, apex of which somewhat produced, rounded. Scattered setae over dorsal surface of pereion and pleon.

Antennule with two distal peduncle segments of equal length, flagellum of four short similar articles.

Antennal peduncle 5-segmented, second segment longest, flagellum of

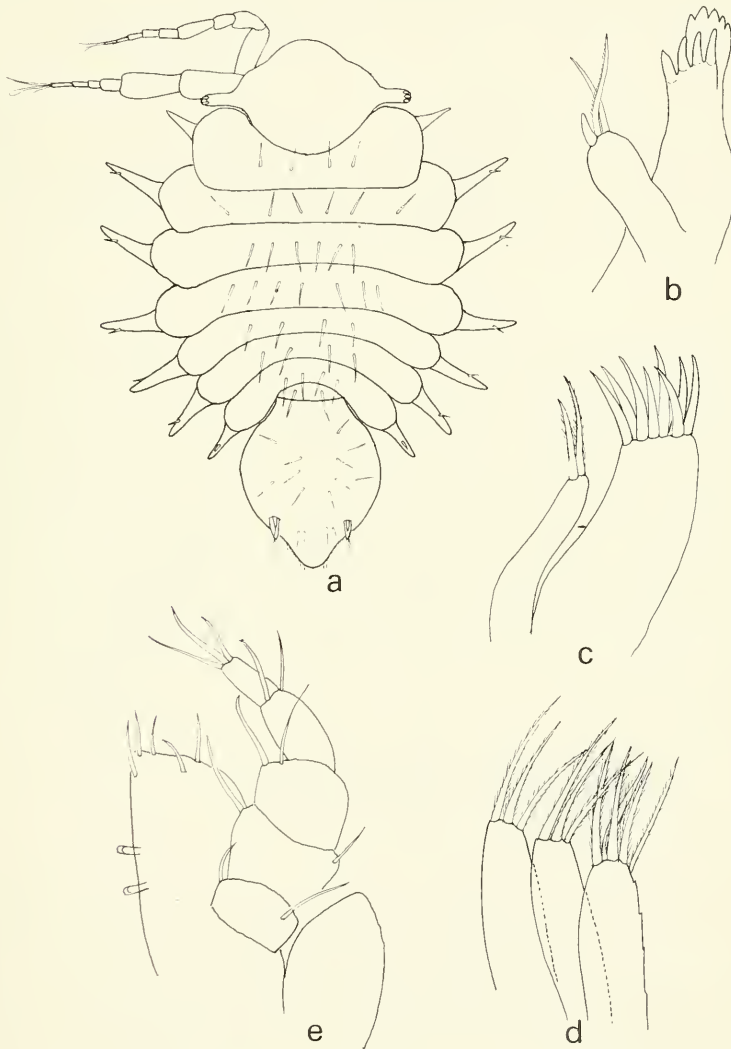


Fig. 13. *Pleurosignum capensis*. a. ♂ dorsal view. b. Left mandible. c. 1st maxilla. d. 2nd maxilla. e. Maxilliped.

6 articles. Mandibular molar process digitiform, apically rounded, bearing short terminal spine and two setae; incisor process armed with five teeth; lacinia of left mandible with four stout teeth.

First maxilla inner ramus one third width of outer ramus, with two apical setae, outer ramus with eight curved distal spines.

Second maxilla inner ramus bearing fine setae, two lobes of outer ramus each with three setae.

Maxillipedal endite with two coupling hooks, five distal setae; palp 5-segmented, second and third segments only slightly narrower than endite.

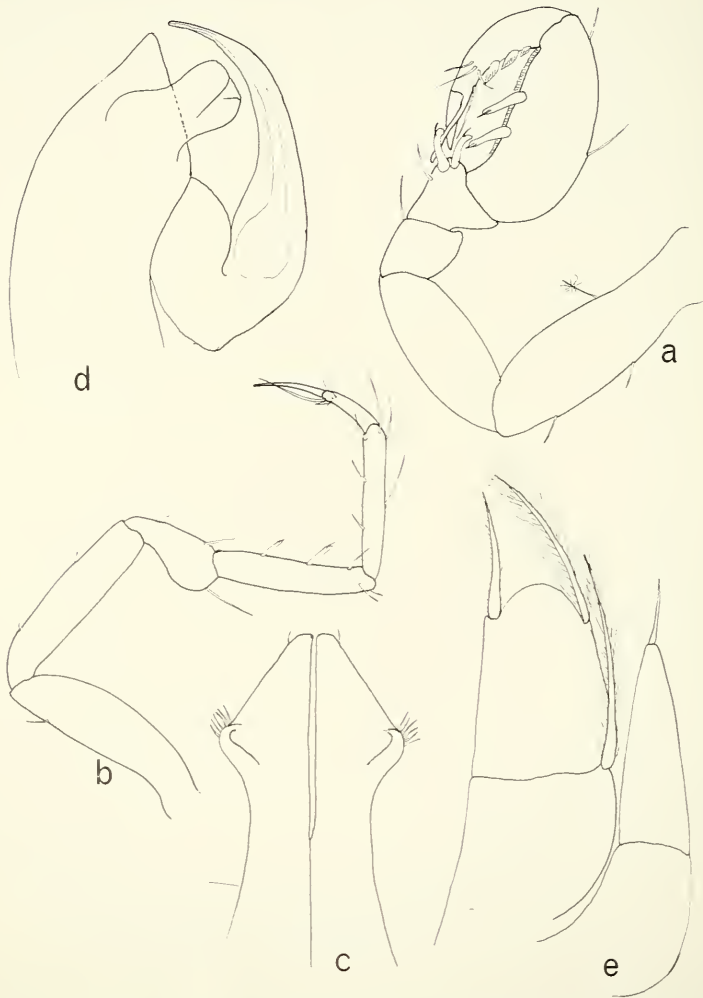


Fig. 14. *Pleurosignum capensis*. a. Pereiopod I. b. Pereiopod VII. c. Pleopod 1 ♂. d. Pleopod 2 ♂. e. Pleopod 3 ♂.

Pereiopod I prehensile, dactylus with strong apical spine and three short spines on inner margin; inner margin of propodus bearing short fringe and two sensory setae; carpus triangular, disto-ventral corner bearing two recurved sensory setae; merus short; ischium and basis more elongate.

Pereiopods II to VII similar, slender, elongate.

Male. Pleopod 1 with distal halves of rami separate, with six short setae at lateral angle of apex.

Pleopod 2 endopod curved, reaching to apex of appendage.

Pleopod 3 inner ramus bearing three elongate plumose setae.

Uropods with peduncle not visible, biramous, dorsal, outer ramus half length and width of inner ramus.

Material

SAM-A15355 Holotype 1 ovig. ♀ TL 1,9 mm 34°17'S 18°39'E 68 metres

SAM-A15356 Allotype 1 ♂ TL 2,0 mm 34°13'S 18°36'E 48 metres

SAM-A15354 Paratypes 1 ovig. ♀ 1 ♂ 34°21'S 18°43'E 81 metres

SAM-A15357 Paratype 1 ovig. ♀ 34°51'S 23°41'E 183 metres

Remarks

Four species of *Pleurosignum* must be considered when determining the status of the present material. *P. magnum* Vanhöffen from the Antarctic, southern Chile, and the Falkland Islands, possesses a too spinose pereiopod I and pleotelson. *P. elongatum* Vanhöffen from the Antarctic differs in the body shape, especially that of the pleotelson, while pereiopod I is also different. *P. lunata* (Hale) from the Antarctic appears to lack spinose coxae, the antennule is much smaller than the antenna, while pereiopod I is not as spinose as the present species, and pereionite I is very much broader. *P. chilensis* Menzies from southern Chile most closely resembles the present species, but the apex of pleopod 1 in the male is narrower, as is the pleotelson.

The specific name is derived from the Cape Province, in whose waters the species was found.

Family Munnopsidae

Munnopsis bispinosus sp. nov.

Figs 15–16

Description

Female. Head and first four pereionites equal in length to, but at least twice wider than posterior pereionites and pleotelson together. Front of cephalon evenly convex between antennal bases, head bearing two strong submedian dorsal spines near posterior margin. First four pereionites subequal in length, fourth segment slightly narrower. Pereionites I to IV widening laterally, with low rounded tubercles. Pereionites V to VII and pleotelson fused, separate segments difficult to distinguish; pair of submedian dorsal spines on sixth

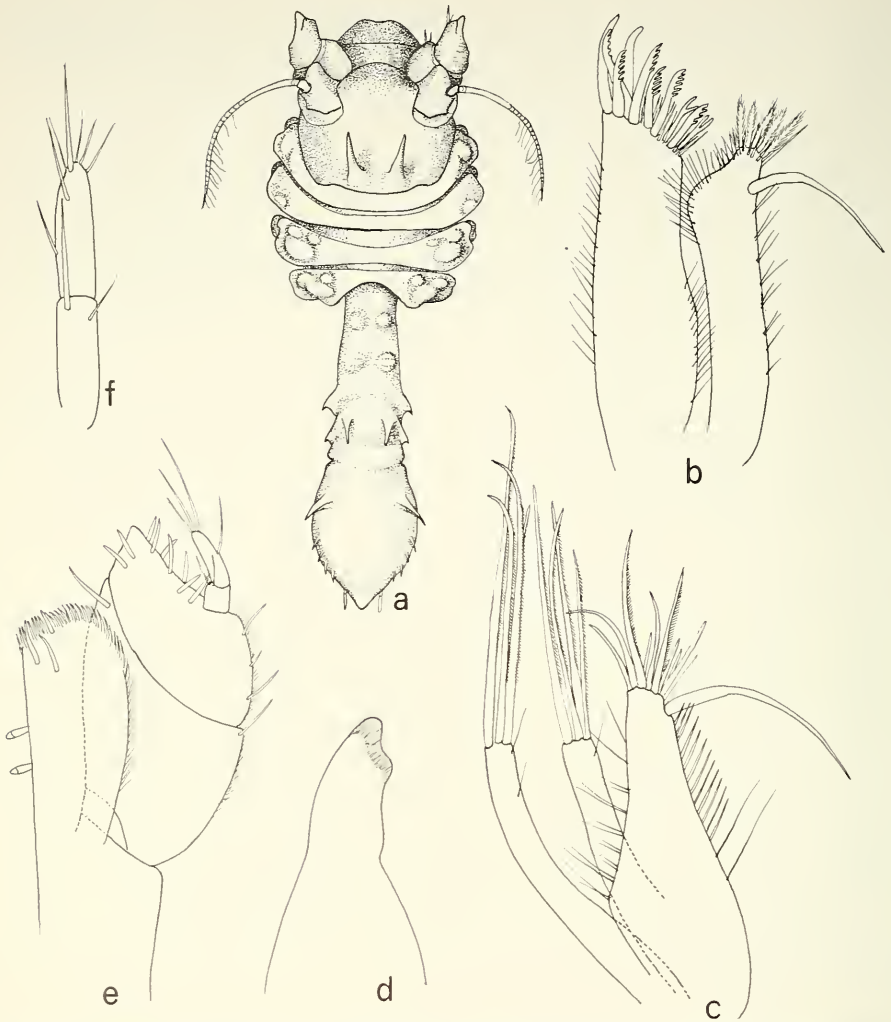


Fig. 15. *Munnopsis bispinosus*. a. ♀ dorsal view. b. 1st maxilla. c. 2nd maxilla. d. Mandible. e. Maxilliped. f. Uropod.

segment; three short lateral spines may demarcate posterior pereionites. Pleotelson with five pairs lateral spines, most proximal pair largest, pleotelsonic apex narrowly rounded. Antennule with broadly triangular basal segment, second segment small, followed by flagellum of two smaller segments and relatively long segment and sixteen segments of decreasing size bearing single aesthetases.

Four proximal segments of antenna present, with two acutely rounded distal processes on fourth segment.

Mandible lacking palp, triangular, apically rounded.

First maxilla outer ramus with ten spines of three types: entire, distally dentate on one margin, and Y-shaped; inner ramus with single elongate distal seta and several short fringed setae.

Second maxilla with two lobes of outer ramus slender, elongate, each bearing four elongate setae finely fringed on one margin; inner ramus basally broad, tapering distally, with several simple and fringed setae at apex, plus single elongate simple seta at inner distal angle.

Maxilliped with second and third segments of palp very broad, fourth and fifth segments small, fourth segment inserted at outer distal angle of third segment, latter armed medially with nine short spines; endite narrower than

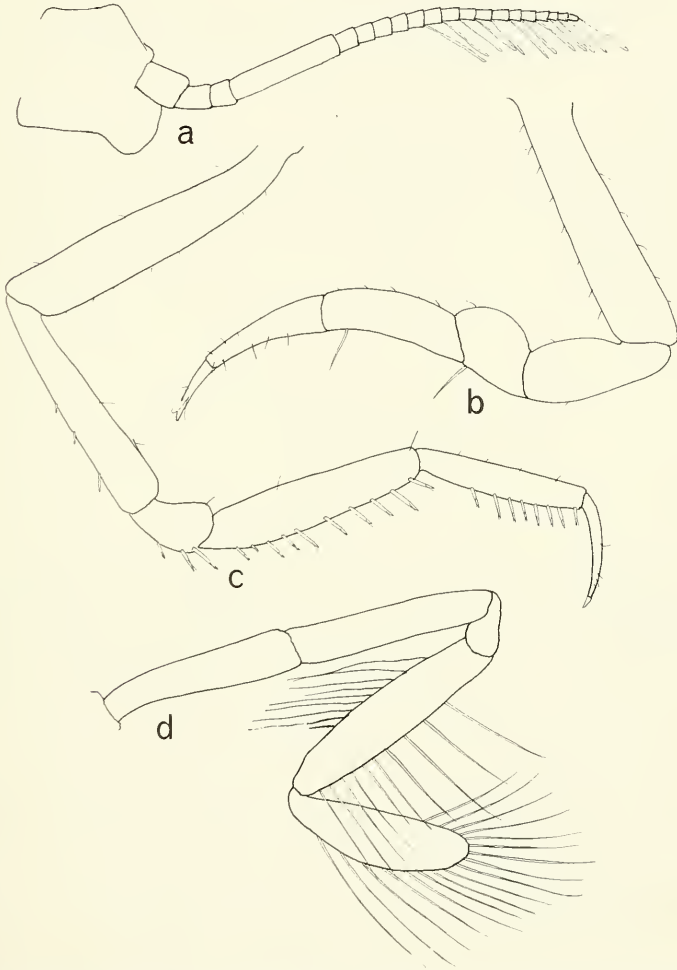


Fig. 16. *Munnopsis bispinosus*. a. Antennule. b. Pereiopod I. c. Pereiopod II. d. Pereiopod V.

second or third palp segments, outer distal margins bearing short setae, inner margin with two coupling hooks.

Pereiopod I ambulatory, shorter than pereiopod II.

Pereiopod II with several sensory spines on ventral margin of propodus, carpus, merus and ischium.

Pereiopods V to VII similar, but decreasing in size posteriorly, dactyli lacking; propodi oar-like, with long plumose marginal setae, shorter than carpus, merus very short, ischium and basis subequal in length.

Uropod uniramous, 2-segmented.

Material

SAM-A15346 Holotype 1 ♀ TL 5,6 mm

34°16'S 18°14'E 158 metres, from fine khaki sand and gravel

Remarks

M. bispinosus differs from all nine species described (see Wolff 1962). In general body shape, this species resembles *M. australis* Beddard but the latter lacks pereional spines and tubercles, while pereiopods V to VII are more slender and elongate.

The species is named for the pair of strong spines on the head.

Family Acanthaspidiidae

Paracanthaspidia natalensis sp. nov.

Figs 17–18

Description

Body one-third longer than wide. Median rostrum tapering slightly, apically just bifid; lateral margin of head bilobed. Eyes absent. Lateral margin of pereionite I consisting of single leaf-like extension. Pereionites II to IV with bilobed lateral margins. Pereionites V to VII lateral margins single flattened apically rounded lobes; coxal plates barely visible dorsally. Pleon 2-segmented, first segment tiny, second segment broad, wider than long, with twelve strong marginal processes.

Antennule consisting of 3 (?4)-segmented peduncle, basal segment broadest, second segment more elongate, flagellum of 14–15 articles, distal articles bearing aesthetascs.

Two basal segments of antenna each with external spine-like process, distal spine articulated.

Mandibles bearing 3-segmented palp, middle segment longest, terminal segment bearing several setae; incisor process 5-dentate, slender, setal row of about 12–15 dentate spines and slender setae; molar process relatively elongate,

bearing three distal teeth and four or five short fringed setae; lacinia of left mandible tridentate.

First maxilla with inner ramus bearing one fringed setae and one short simple seta distally; outer ramus with nine curved and sparsely dentate spines on distal margin.

Second maxilla with two outer lobes slender, each bearing four fringed setae/spines distally; inner lobe wider than outer lobes, bearing numerous fine simple setae plus six dentate spines on inner margin.

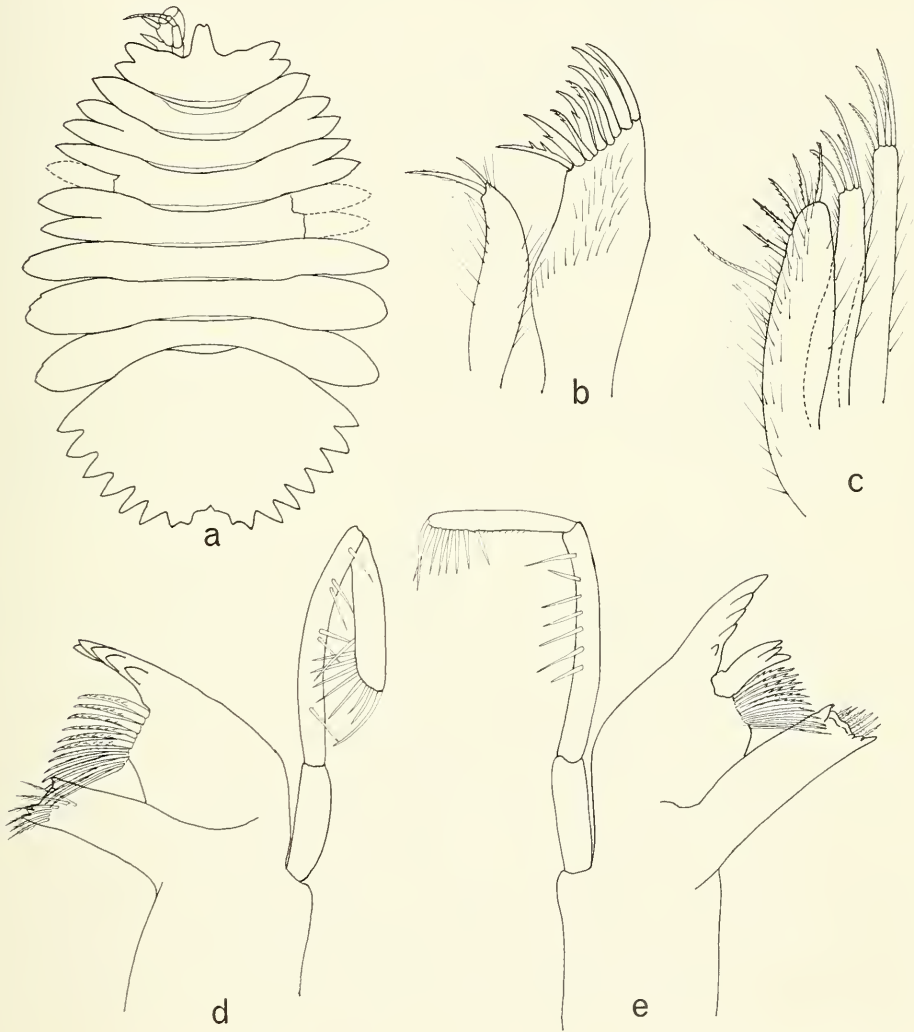


Fig. 17. *Paracanthaspidia natalensis*. a. ♂ dorsal view. b. 1st maxilla. c. 2nd maxilla. d. Right mandible. e. Left mandible.

Endite of maxilliped broad, bearing four coupling hooks and eight or nine short penicils distally, short spine on inner distal margin; palp 5-segmented, second and third segments broad, two distal segments narrow, numerous setae on four distal segments.

Pereiopod I ambulatory, relatively elongate, dactylus armed with single claw and smaller spine at its base.

Pereiopod II similar to I, with single claw.

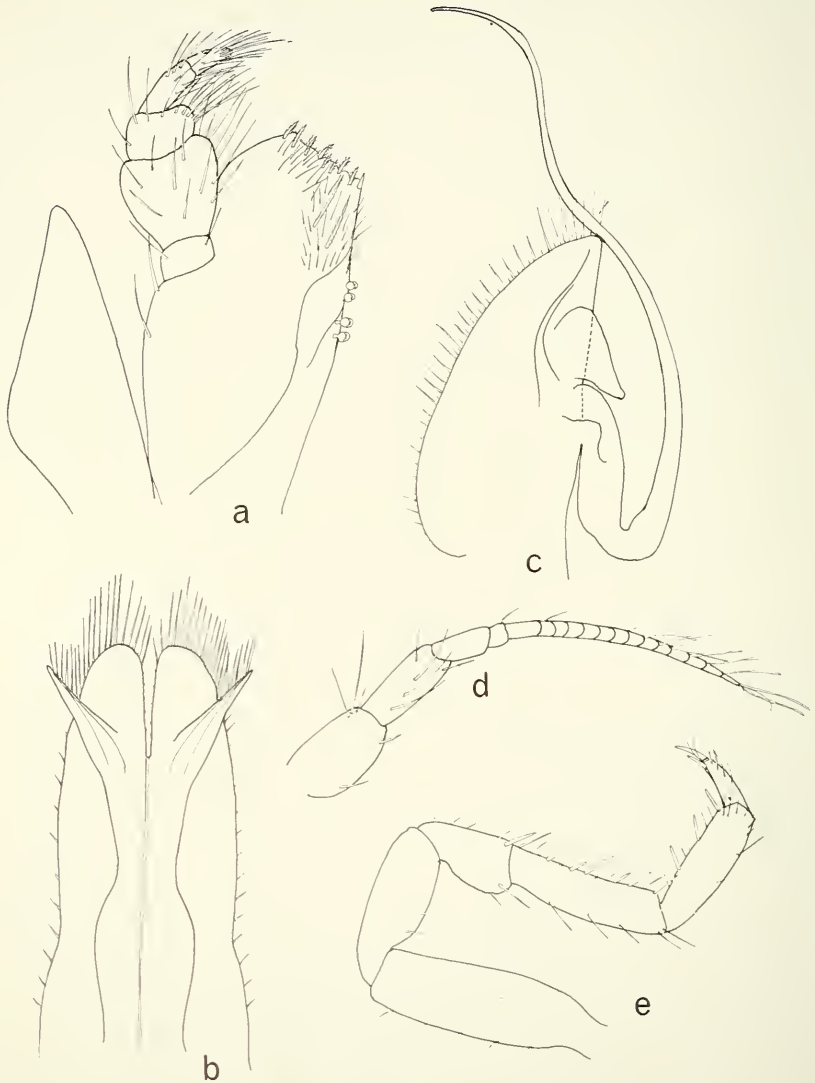


Fig. 18. *Paracanthaspidia natalensis*. a. Maxilliped. b. Pleopod 1 ♂. c. Pleopod 2 ♂. d. Antennule. e. Pereiopod I.

Pleopod 1 elongate, two halves separate for about a quarter of total length, distally rounded and carrying several setae.

Pleopod 2 with long slender endopod.

Material

SAM-A15349 1 ♂ Holotype TL 8,0 mm

27°14'S 33°22'E 1360 metres, from globigerina ooze.

(Antennae and uropoda missing; pereopods I and II present, remaining pereopods missing; pereionites III and IV damaged.)

Remarks

Although this specimen does not have a single spine-like extension of the head, but a bifid process, and the dactyli of pereopods I and II appear to have a single claw plus a secondary spine rather than two claws, it most closely resembles *Paracanthaspidia mucronata* (Menzies & Schultz 1967: 161). *P. natalensis* differs from this species in the shape of the lateral extensions of the pereionites, and in the number of marginal processes of the pleotelson. The specific name is derived from Natal, the province in whose waters the species was found.

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